

## ABSTRACT

**(0116)** An intraoperative neural monitoring system includes a power source and a simulator powered by the power source to deliver a cycle of electrical stimulation to a patient as a first group of positive or negative phase pulses automatically followed by a second group of pulses of opposite phase or polarity to the pulses of the first group. An activation performed to initiate delivery of the first group of pulses is effective to deliver the entire cycle of stimulation. A method of intraoperative neural monitoring involves activating a simulator to deliver a biphasic cycle of electrical stimulation to a patient during an operative procedure, delivering the entire cycle of electrical stimulation to the patient in response to the activating step and detecting EMG activity in the patient.